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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,194	03/17/2004	Roman Heckt	10541-1989	3418

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EXAMINER

FORD, JOHN K

ART UNIT	PAPER NUMBER
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3753

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/802,194

Applicant(s)

HECKT ET AL.

Examiner

John K. Ford

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 4/24/06 + 3/27/06
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 45, 78B is/are pending in the application.
- 4a) Of the above claim(s) 78B is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/16/05 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner. *as containing new matter*  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Pursuant to the filing of an RCE on April 24, 2006, the amendment of March 27, 2006 has been entered and is addressed in the office action below. Applicant's response of March 27, 2006 has been studied in conjunction with the response of November 16, 2005. The arguments made in both responses are addressed below. The examiner would strongly suggest filing a CIP of this application and insert what ever partition walls applicant needs to add to make the device operative for its intended purpose.

The proposed drawing corrections of November 16, 2005 have not been approved because they contain "new matter" not supported by the original disclosure. See the lack description rejection immediately below.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 4 and 5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amendments made to the drawings to show entirely new and previously undisclosed walls between the right-hand set of tubes

and the left-hand set of tubes in amended drawing Figures 3, 4 and 5 are not supported by anything in the original specification, original drawings or original claims. On page 2 of his remarks applicant implies that these new drawings are somehow supported by the original disclosure, there is no evidence that this is the case. If applicant disagrees, applicant is required to point out specifically where, in the original disclosure, support can be found for the addition of these new and previously undisclosed walls between the right-hand set of tubes and the left-hand set of tubes in amended drawing Figures 3, 4 and 5.

In the response of March 27, 2006 applicant states that the following sentence permits the addition of the precisely located partition walls in the November 16, 2005 proposed drawing corrections: "The term collector, or collector region, respectively, is, with the corresponding function in reversed sense, also meant as distributor or distributor region, respectively, without special reference." As grammatically difficult as that phraseology is, all that it conveys to the examiner is that whatever is called the "collector" or "collector region" could equally well be called the "distributor" or "distributor region". It does not in any way suggest the, precisely and differently drawn in each of the embodiments, "new matter" partition that counsel proposes adding to the drawings. In addition counsel references paragraph 28, pertaining to non-elected Figure 3 (not the elected and currently examined Figure 4) that states: "In Fig. 3 a collector unit 8 [including collector regions 9 and 10] for a heat exchanger 3 with separate collector and distributor units is shown." A fair reading of this statement is that in Figure 3 a collector unit 8 [including collector regions 9 and 10] for a heat exchanger 3 is shown (and the

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examiner agrees with that much of the statement, element 8 is a "collector") and that the heat exchanger 3 has separate collector and distributor units (the distributor unit not being shown in any drawing or in any way placed in operative relationship with the collector unit).

Renaming the "collector unit" 8 as the "distributor unit" 8 as suggested by the phrase: "The term collector, or collector region, respectively, is, with the corresponding function in reversed sense, also meant as distributor or distributor region, respectively, without special reference", as counsel argues cures the deficiency in the original disclosure, simply transposes the problem, wherein the collector unit is not being shown in any drawing or in any way placed in operative relationship with the distributor unit 8.

The enablement rejection reproduced immediately below is deemed applicable to the now amended claims based on the fact that applicant cannot rely on new matter, unsupported by the original disclosure, to overcome an enablement rejection.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 4 and 5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claims 1, 4 and 5, in the instant application it is not explained how the coolant fluid in collector region 9 flows into and out of pipes 6 in Figure 4 and then to the external connection(s) of coolant circuit 1 shown in Figure 1. In other words, if coolant enters collector region 9 from the coolant tubes 6 shown in Figure 4, where does the coolant enter those tubes? There doesn't appear to be an operative coolant circuit for the coolant disclosed with regard to the passage of coolant to and from collector region 9. If applicant maintains otherwise, please explain the precise flow path that the coolant follows from the inlet to the outlet of the collector region and why the coolant doesn't just flow through the collector region without circulating through any of the tubes 6, without the introduction of "new matter" that is unsupported by the original disclosure. There is nothing to support the newly added limitations that in both the coolant and refrigerant circuits the tubes are configured to distribute fluid from and return [i.e. collect fluid to] fluid to the collector. By definition a collector collects fluid and a distributor distributes fluid. The same structure does not do both.

As a matter of interpretation, claims 1, 4 and 5 have been construed here to be directed to a heat exchanger, per se. There is present in the claims much functional language regarding the intended manner of operation and that has not been given weight in assessing the patentability of the heat exchanger itself, consistent with MPEP 2114, incorporated here by reference. Applicant has not responded to this statement therefore is deemed to have accepted it as controlling claim interpretation here.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The examiner is completely confused by applicant's new claim language. The collector unit 8 including collector regions 9 and 10 collects fluid. That much is clear. There is however no disclosure to support that a "collector" distributed fluid. A distinct, inadequately disclosed structure (a distributor) is apparently responsible for that function. The specification states: "The term collector, or collector region, respectively, is, with the corresponding function in reversed sense, also meant as distributor or distributor region, respectively, without special reference." As grammatically difficult as that phraseology is, all that it conveys to the examiner is that whatever is called the "collector" or "collector region" could equally well be called the "distributor" or "distributor region". It does not in any way suggest the, precisely and differently drawn in each of the embodiments, "new matter" partition that counsel proposes adding to the drawings, nor does it suggest that the collector simultaneously performs the function of collection and distribution of fluid.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

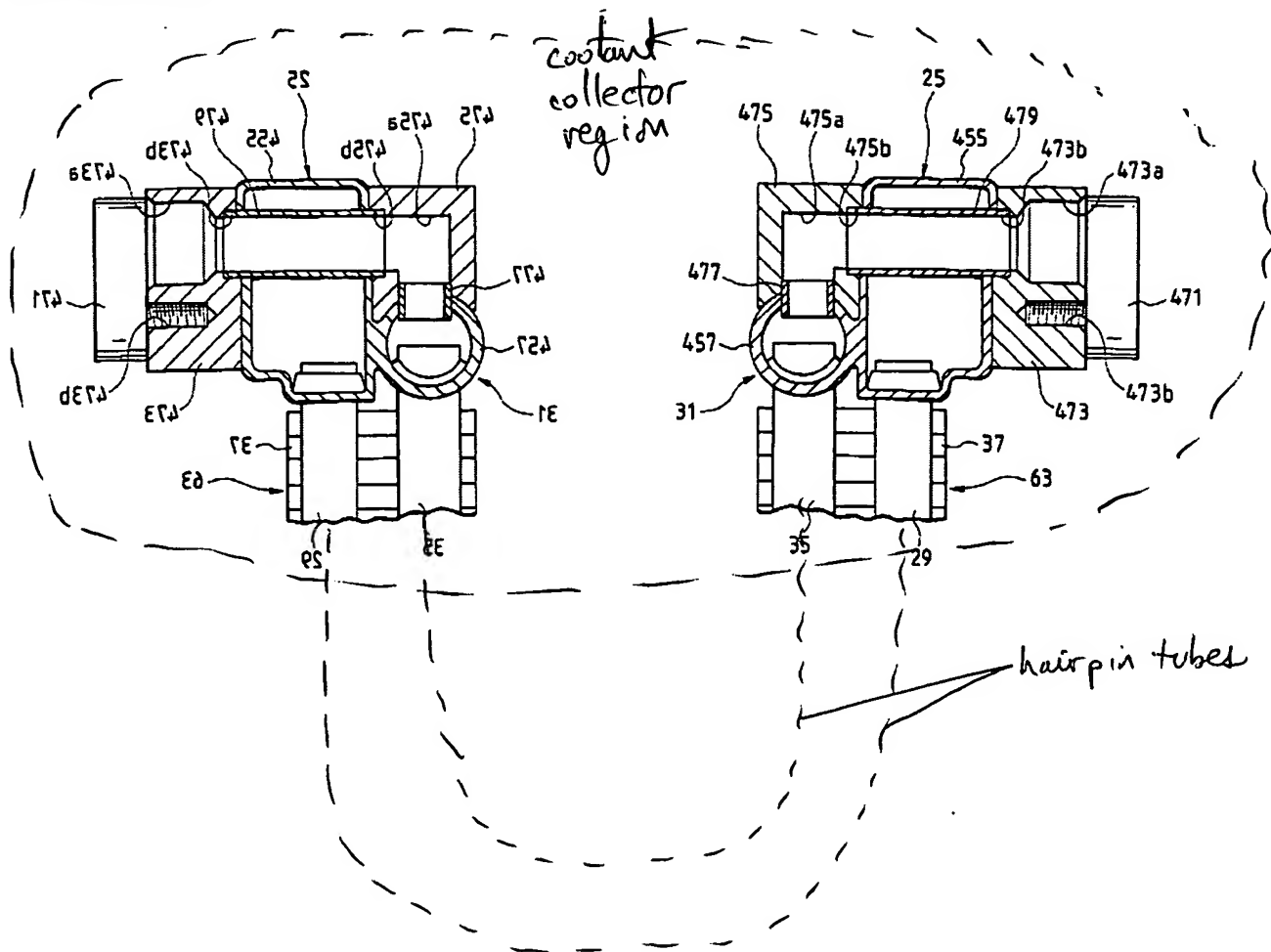
Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Makino et al (6,095,239), particularly Figures 24-27.

Figures 24-27 of Makino et al show the collector region of one multi-tubular heat exchanging circuit at least partially surrounding the collector region of another multi-tubular heat exchanging circuit. Pipe 479 in Figure 24 (part of a refrigerant collector) is located inside coolant collector 25. The tubes are configured to distribute fluid (refrigerant or coolant) from or return fluid depending on the direction of flow through piping sections 471 (see Makino, col. 10, lines 47-48). The two heat exchanging circuits are arranged one after the other in the direction of the ambient fluid over the two heat exchanging circuits. The other Figures (e.g. Figure 1) may be relevant as well, giving the limitation in claim 1 "partly surrounded" its broadest reasonable meaning.



Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makino et al as applied to claims 1 and 4 above, and further in view of McKibben et al (USP 2,298,895)

By comparison of Figure 3 of McKibben, that discloses a "straight-through" heat exchanger with headers 13 and 14 at opposite ends (similar to what Makino shows in Figures 24-27), and Figure 5 of McKibben (showing a "hairpin type" heat exchanger with both headers 22 and 25 adjacent one another at one end of the heat exchanger), the art recognized equivalence of these two types of heat exchangers is established. To have made the tubes 35 and 29 in Makino Figures 24-27 as the "hairpin" type rather than the "straight-through" type would have been obvious to one of ordinary skill in the art to advantageously fit the heat exchanger in a smaller air duct. As such, the inlet header and outlet header (depicted in either Figures 24 or 27 of Makino) would be located at the same end of the heat exchanger denoted for purposes of rejection the "coolant collector region." See the illustration below.



Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Makino or Makino/McKibben as applied to claim 1 above, and further in view of Huggins (3,045,979).

Huggins shows two rows of staggered tubes 6, offset from one another in such a way that the front set of tubes does not "shade" the rear set of tubes with respect to the flow of ambient air. To have configured the tubes (35 and 29) of the two heat exchanging circuits in Makino or Makino/McKibben that are arranged one after the other in the direction of the ambient fluid over the two heat exchanging circuits in the offset

manner taught by Huggins for the purpose of improving heat transfer would have been obvious to one of ordinary skill in the art.


The recitations of intended fluids, directions and intended manners of operation of the device are not given patentable weight in a claim directed to a heat exchanger apparatus. See MPEP 2114, incorporated here by reference and in particular, Ex parte Masham, 2 USPQ2d 1647 (BPAI 1987). The apparatus does undergo a metamorphosis into a new apparatus merely by affixing instructions to it as to how it will be used.

Claims 1, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makino or Makino/McKibben or Makino/McKibben/Huggins as applied to claims 1 and 5 above, and further in view of Khelifa (US 2001/0001982) or Ben Fredj (US 6,810,952).

To have made the compound radiator/evaporator 3 of Khelifa in the manner taught by Makino or Makino/McKibben or Makino/McKibben/Huggins to minimize the use of space in the vehicle would have been obvious to one of ordinary skill in the art. Likewise, to have made the evaporator/radiator (10, 20) of Ben Fredj in the manner taught by Makino or Makino/McKibben or Makino/McKibben/Huggins to minimize the use of space in the vehicle would have been obvious to one of ordinary skill in the art.

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Any inquiry concerning this communication should be directed to John K. Ford at telephone number 571-272-4911.



**John K. Ford**  
**Primary Examiner**